Chapter 4
Implementation

Following adoption of this plan, a number of implementation steps are needed before the Fish Creek area is actually developed for agriculture. Most of these steps require funding before they can occur. Therefore exactly when or how implementation will occur is outside the purview of this plan. This chapter discusses the implementation steps and, in some cases, the options available.

Baseline studies. The studies listed below are in order of priority.

1. Sand and gravel inventory (see page 86). In conjunction with this an evaluation of potential archeological resources should be done with field surveys in areas of high potential. Priority should be given to areas where access corridors are proposed. Both the selected north-south corridor and the alternate corridor should be evaluated.

2. Water quality investigation and monitoring to: (1) determine its suitability for domestic and agricultural use and its susceptability to agricultural pollutants; and (2) establish a baseline of water quality and aquatic benthos conditions prior to implementation of the agricultural project and to monitor these conditions following agricultural development.

3. Surface water and ground water evaluations to determine the quantity of water available for agricultural needs and instream flow studies to determine the requirements of fish and wildlife for water from the three major streams within the project (with Fish Creek and its tributaries as first priority).

4. Meteorological investigation to determine wind direction and velocity for the purpose of determing whether or not windbreaks are needed and where. This study should begin at the earliest possible date as, ideally, five years of data is needed.

5. Wildlife and bird population study to determine baseline population data for large unqulates, small mammals, and birds in the different vegetation types represented within the agricultural project area.

6. Pesticide residue sampling to detect and measure any residues that may exist in the area prior to agricultural development.

Benefit/Cost Analysis

The Benefit/Cost Analysis should be expanded to include consideration of all values accessed by a road across the Little Susitna River, refined road costs, and a sensitivity analysis of the agricultural assumptions and benefits.

Project Roads

Funding is needed for the construction of roads within the project area. The Matanuska-Susitna Borough intends to build the initial roads to the standards described below. To reduce initial costs, the roads may be built in phases. The Borough's engineering staff estimates initial construction costs for phase 1 roads as $17 million and phase 2 roads $2.22 million, or $19.22 total. These costs are subject to modification following field engineering which will result in both a preliminary design and a more accurate cost estimate.

It is assumed that eventually the project area will be traversed by two major highways; (1) a north-south route connecting the Point MacKenzie area (and possibly Anchorage via a Knik Arm crossing) with Willow and points north on the Parks Highway; and (2) an east-west route connecting the Beluga area with the railbelt. Therefore, initial road design and construction in these corridors must allow for eventual upgrading to highway standards.
Phase 1 roads consist of approximately 44 miles of road that are needed to provide access to the project from Point MacKenzie and to all the tracts. Approximately 10 additional miles of road will be needed to complete the internal circulation system (Phase 2 roads). The mileage for Phase 3 roads has not been calculated since most of them are on Moraine Ridge and will be revised as part of the general development plan for Moraine Ridge.

For the short term it is expected that lower quality roads will be constructed as the first generation road system. The minimum standards should be gravel roads, 24 feet wide with a two foot stable gravel surface, 2:1 side slope, a maximum grade of ten percent, vee ditches with culverts and bridges where necessary. These standards should apply to both the access roads and the interior project roads. These standards are equivalent to the interior roads in the Point MacKenzie agricultural project.

Initial access

There are several options for providing initial access to the project. These are summarized on the table on page 92 and shown on the map on the next page. The south option is an extension of the Point MacKenzie Road and requires a bridge across the Little Susitna River. The north options all originate along the Parks Highway, north of Houston. Eventually the north-south corridor is expected to intersect the Parks Highway near Willow. The Department of Transportation and Public Facilities has looked at several possibilities for this intersection including use of the existing road south of Willow Creek or continuing the corridor straight across Willow Creek. The latter alternative would result in a straighter road but would bisect the proposed Willow Creek State Recreation Area along Willow Creek. For the short term, the north-south corridor could connect with the Parks Highway just north of the Nancy Lake Recreation Area via one of three alternatives: (1) the Nancy Lake Road (would cross Nancy Lake Recreation Area); (2) access south of Crystal Lake to the Long Lake Road (would cross private property); or (3) access from northwest of Florence Lake south around Crystal Lake to the Long Lake Road.

This plan recommends that initial access be constructed from the south, despite its greater initial cost (See Chapter Three, Transportation Section, page 72). If funds are not available to construct initial access from the south, the Florence Lake (3) access is the second recommended option. Though it would cost a little less to construct a road via Crystal Lake, that route

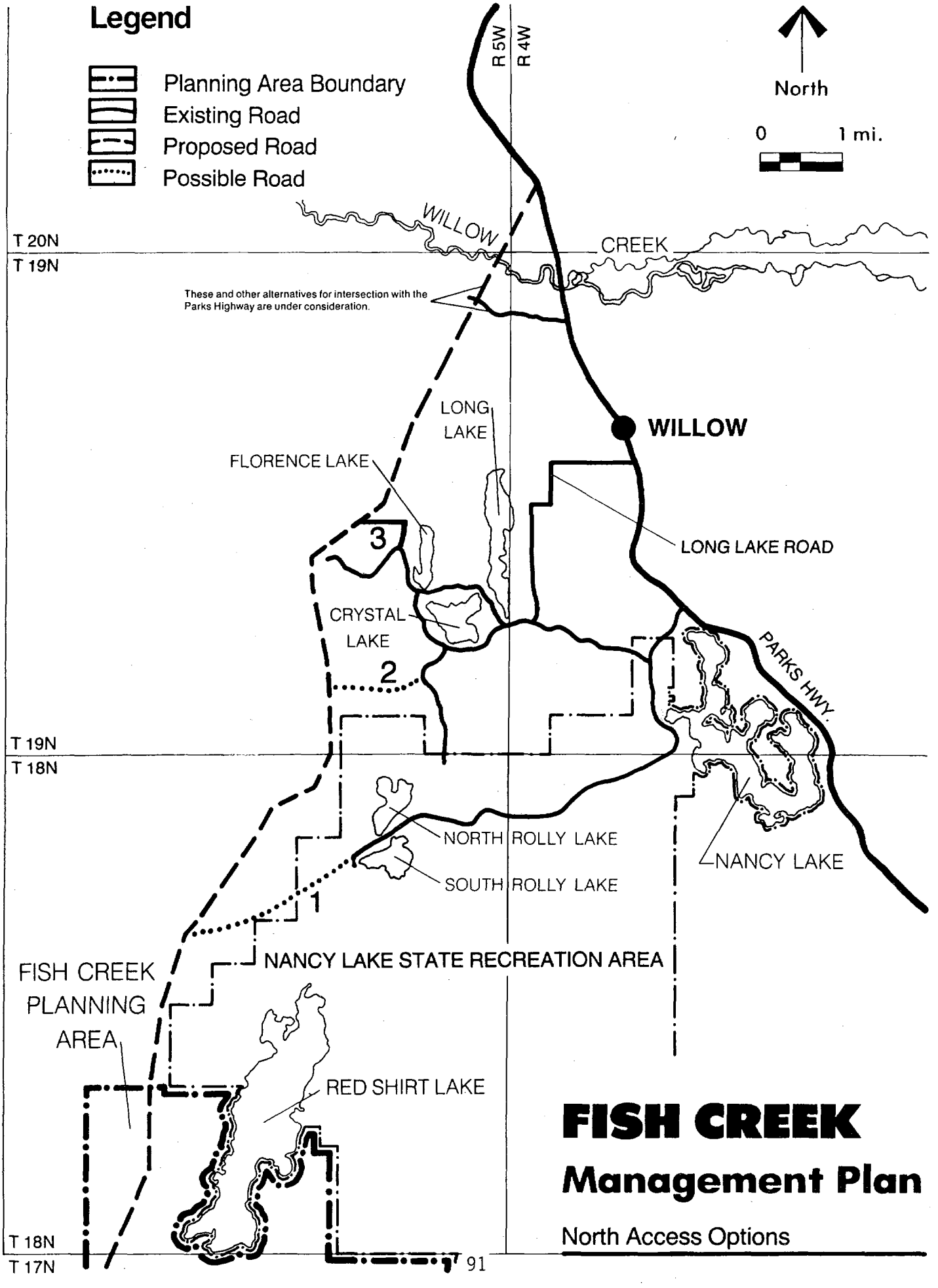
Legend
Planning Area Boundary
Existing Road
Proposed Road
Possible Road
North
0
1 mi.
R 5W
R 4W
WILLOW CREEK
T 20N
T 19N
These and other alternatives for intersection with the Parks Highway are under consideration.
LONG LAKE
WILLOW
FLORENCE LAKE
LONG LAKE ROAD
3
CRYSTAL LAKE
2
PARKS HWY.
T 19N
T 18N
NORTH ROLLY LAKE
SOUTH ROLLY LAKE
NANCY LAKE
1
NANCY LAKE STATE RECREATION AREA
FISH CREEK PLANNING AREA
RED SHIRT LAKE
T 18N
T 17N
FISH CREEK
Management Plan
North Access Options

Table 3

COMPARISON OF ALTERNATIVES FOR ACCESS TO THE FISH CREEK PROJECT

Road Options	Distance from Wasilla to project boundary (miles)	Construction within north-south corridor		Construction outside north-south corridor		Total construction	
		Distance (miles)	Cost (millions)	Distance (miles)	Cost (millions)	Distance (miles)	Estimated initial construction cost (millions) *1
North options	(to north boundary)						
Nancy Lake (1)	35.5	2.0	$ .61	2.15	$1.60	4.15	$2.21
south of Crystal Lake (2)	36.25	5.7	$1.40	1.3	$ .57	7.0	$1.97
northwest of Florence Lake (3)	39.25	8.25	$2.04	0.0	$0.00	8.25	$2.04
South option	(to south boundary)						
44' wide bridge	32.5	4.7	$4.14	0.0	$0.00	4.7	$4.14

*1 These figures should be used only for purposes of comparing the alternatives because the method used to estimate costs of the north options was different from the method used to estimate the cost of the south option. The cost figures for the north options were calculated by DNR using the Department of Transportation's 1980 unit costs as projected for the second half of 1983 by SCS. DOT's unit costs are based on 3:1 side slope. The standards agreed to for the first generation roads call for 2:1 side slope. The 2:1 side slopes are estimated to cost on the average 15% less than the 3:1 side slopes would. The above figures are therefore reduced by 15% from the DOT/SCS figures. In addition, these figures include 35% for overhead, based on Matanuska-Susitna Borough costs. DOT's overhead is estimated to be 52%. (Both the Borough and DOT's overhead percentages include preliminary engineering and contingency reserve.) The cost figure for the south option was calculated by the Matanuska-Susitna Borough. Generally, the borough's cost estimates are lower than the DNR's. Therefore, it is likely that there is a greater difference between the north options and the south option than is apparent from this chart.

crosses private property and might therefore involve additional costs. The Crystal Lake (2) access also requires building 1.3 miles of road that is not in the permanent corridor. The Nancy Lake access option (1) is opposed by the Division of Parks because of negative impacts on recreation and because federal dollars from the Land and Water Conservation Fund were used to construct the Nancy Lake Road. If this road becomes part of the state or borough road system, the Land and Water Conservation funds would probably have to be repaid to the federal government. The cost figures given in the table for the Nancy Lake road option include $286,000 which is the federal share of the road construction costs. It is possible that the state would have to repay as much as $760,000, the total amount of Land and Water Conservation funds in the Nancy Lake Recreation Area. Alternatively, the federal government could require replacement, at current costs, which would be still more expensive. In addition to the problems, the Nancy Lake access option requires the greatest amount of construction outside the permanent corridor.

The final decision on the location of the initial access to the Fish Creek project will be made during implementation and will probably depend in part on the amount of funding available for road construction.

Survey

Funding is needed for survey of the tracts. The total survey project is estimated to require 275 person months, working 6 day weeks.

Administration

Funding is also needed for administration of the sale for the Divisions of Land and Water Management and Agriculture and the Matanuska-Susitna Borough. In addition, the Division of Forestry requires funding in order to be able to provide assistance to farmers wishing to sell their timber, and the Department of Fish and Game needs funding to be able to assist with field identification of problems to be addressed in farm conservation plans.

Land Sale

At this time the state and borough plan to hold two separate but coordinated sales. The sales will be held separately if the state and borough offer different sale terms because it will be less confusing to prospective purchasers. If the sales are separate, they will be coordinated and will be held within a month of each other if at all possible.

Table 4

FISH CREEK INITIAL IMPLEMENTATION BUDGET
PRELIMINARY ESTIMATE

Road Construction, Phase 1 *1 (based on access from the south)	$17.00 million
Baseline Studies (sand and gravel, water, and wind studies)*2	.6
Survey of agricultural tracts	2.2
Administrative costs (sale preparation and monitoring)	.3
Total	$20.01 million *3

*1 Road construction costs were estimated by the Matanuska-Susitna Borough. Phase 2 roads are estimated to cost $2.22 million. This cost breakdown of $17,000,000 for phase 1 roads and $2,220,000 for phase 2 roads assumes that all primary roads are built in phase 1. The road phases map (page 77) shows about 2 1/3 miles of primary road as phase 2. If this 2 1/3 miles were not built until phase 2, the initial construction costs for phase 1 become approximately $16,370,000 and phase 2 $2,850,000.

*2 This does not include costs of the archeological study (minimal if done in conjunction with the sand and gravel inventory), the instream flow study, the wildlife and bird population study, or the pesticide residue sampling.

*3 This does not include costs of bringing electricity to the farms. The Matanuska Electric Association estimates that cost to be an additional $6.27 million. These costs may be met either by a legislative appropriation or by those being served or a combination of sources.